

## Safety Data Sheet

# Tetramethylammonium hydroxide solution

Version : V2.0.0.1

Report No. : BWZ0061-2016-MSDS-US

Creation Date : 2025/11/04

Revision Date : -



\*Prepared according to American OSHA HCS-2024 (29 CFR 1910.1200)

## 1 Identification

### Product identifier

Product Name	Tetramethylammonium hydroxide solution
Cat No.	BWZ0061-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

### Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

### Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

### Emergency phone number

Emergency phone number	010-58103678
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## 2 Hazard(s) identification

### Hazard classification according to 29 CFR 1910.1200

Acute Toxicity - Oral	Category 2
Acute Toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1C
Serious eye damage/irritation	Category 1
Specific target organ toxicity - single exposure	Category 1
Specific target organ toxicity - repeated exposure	Category 1

### Label elements

Hazard pictograms	
Signal word	<b>Danger</b>

### Hazard statements

H300	Fatal if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H370	Causes damage to organs(nervous system)
H372	Causes damage to organs through prolonged or repeated exposure(nervous system)

### Precautionary statements

#### ◆ Prevention

P260	Do not breathe gas/mist/vapour/spray.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

#### ◆ Response

P321	Specific treatment (see related instructions on the label).
P330	Rinse mouth.
P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### ◆ Storage

P405	Store locked up.
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#### ◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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### Other hazards

	Not applicable.
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### Hazard description

#### ◆ Physical and chemical hazards

	No information available
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## ◆ Health hazards

<b>Inhaled</b>	Corrosive product can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage.
<b>Ingestion</b>	Severely toxic effects may result from the accidental ingestion of the product.
<b>Skin Contact</b>	The product can cause severe skin burns following direct contact with the skin. Toxic in contact with skin, systemic effects may result following absorption.
<b>Eye</b>	The product can produce severe chemical burns to the eye following direct contact. If timely and appropriate treatment is not available may cause permanent blindness.

## ◆ Environmental hazards

	Please refer to 12th chapter of SDS.
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**3** Composition/information on ingredients

## | Substance/mixture

	Mixture
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Component	CAS No.	EC No.	Concentration (wt, %)
Water	7732-18-5	231-791-2	75
Tetramethylammonium hydroxide	75-59-2	200-882-9	25

**4** First-aid measures

## | Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
<b>Skin contact</b>	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
<b>Inhalation</b>	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
<b>Protecting of first-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

## | Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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## | Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

**5** Fire-fighting measures

**| Extinguishing media**

<b>Suitable extinguishing media</b>	Small fire: dry chemical, CO <sub>2</sub> or water spray; Large fire: dry chemical, CO <sub>2</sub> , alcohol-resistant foam or water spray; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Do not get water inside containers.
<b>Unsuitable extinguishing media</b>	No information available.

**| Specific hazards arising from the substance or mixture**

1	May emit poisonous fumes on fire.
2	Fire may produce irritating, poisonous or corrosive gases.
3	Development of hazardous combustion gases or vapor possible in the event of fire.
4	May expansion or decompose explosively when heated or involved in fire.

**| Special protective equipment and precautions for fire-fighters**

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

**6 Accidental release measures****| Personal precautions, protective equipment and emergency procedures**

1	Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
2	Do not touch or walk through spilled material.
3	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
4	Use personal protective equipment, do not breathe gas/mist/vapour/spray.
5	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
6	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**| Environmental precautions**

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

**| Methods and materials for containment and cleaning up**

1	Do not touch or cross spills.
2	Cover with anti-solvent foam to reduce evaporation.
3	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-virus suits.
4	Spray water disperses the vapor and dilutes the liquid spill.
5	Do not touch broken containers and spills before putting on appropriate protective clothing.
6	It is recommended that emergency personnel wear a self-contained breathing apparatus with positive pressure and wear anti-corrosion clothing.
7	Transfer to a tank truck or special collector with a corrosion-resistant pump.
8	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by

	bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.

## 7 Handling and storage

### Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

### Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.

## 8 Exposure controls/personal protection

### Control parameters



#### ◆ Occupational exposure limit values

<b>Occupational Exposure limit values</b>	No relevant regulations
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### Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

### Personal protection equipment

<b>General requirement</b>	    
<b>Eye protection</b>	Must wear appropriate anti-corrosion goggles.
<b>Hand protection</b>	Must wear acid and alkali resistant chemical protective gloves.
<b>Respiratory protection</b>	Must wear appropriate personal dust proof gas mask.
<b>Skin and body protection</b>	Must wear acid and alkali resistant chemical protective clothing.

## 9 Physical and chemical properties and safety characteristics

### Physical and chemical properties

<b>Appearance (physical state, color, etc.)</b>	Clear, colorless liquid
<b>Odor</b>	No information available
<b>Odor threshold</b>	No information available

<b>pH</b>	> 13 ( 20°C, 50g/L,Tetramethylammonium hydroxide )
<b>Melting point/freezing point(°C)</b>	63 ( Tetramethylammonium hydroxide )
<b>Initial boiling point and boiling range(°C)</b>	>35
<b>Flash point(Closed cup,°C)</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability</b>	No information available
<b>Upper/lower explosive limits[% (v/v)]</b>	Upper limit : 36 ( Tetramethylammonium hydroxide ); Lower limit : 6.7 ( Tetramethylammonium hydroxide )
<b>Vapor pressure</b>	1.54E-04Pa ( 25°C,Tetramethylammonium hydroxide )
<b>Vapor density(Air = 1)</b>	No information available
<b>Relative density(Water=1)</b>	1.13 ( 20 °C,Tetramethylammonium hydroxide )
<b>Solubility</b>	1000g/L ( 20 °C,Tetramethylammonium hydroxide )
<b>n-octanol/water partition coefficient</b>	-1.4 ( 20 °C, pH: 7,Tetramethylammonium hydroxide )
<b>Auto-ignition temperature(°C)</b>	470 ( Tetramethylammonium hydroxide )
<b>Decomposition temperature(°C)</b>	No information available
<b>Kinematic viscosity</b>	No information available

## 10 Stability and reactivity

### | Stability and reactivity

<b>Reactivity</b>	Contact with incompatible substances can cause decomposition or other chemical reactions.
<b>Chemical stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of hazardous reactions</b>	In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
<b>Conditions to avoid</b>	Incompatible materials, heat, flame and spark.
<b>Incompatible materials</b>	Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 Toxicological information

### | Acute toxicity

Component	LD <sub>50</sub> (oral)	LD <sub>50</sub> (dermal)	LC <sub>50</sub> (inhalation,4h)
<b>Tetramethylammonium hydroxide</b>	7.5~50mg/kg(Rat)	25~50mg/kg(Rat)	No information available

### | Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
<b>Water</b>	Not Listed	Not Listed	Not Listed
<b>Tetramethylammonium hydroxide</b>	Not Listed	Not Listed	Not Listed

### | Others

Tetramethylammonium hydroxide solution	
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage(Category 1C)
<b>Serious eye damage/irritation</b>	Causes serious eye damage(Category 1)
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met
<b>STOT-single exposure</b>	Causes damage to organs(nervous system)(Category 1)
<b>STOT-repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure(nervous system)(Category 1)
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met

## 12 Ecological information

### | Acute aquatic toxicity

<b>Acute aquatic toxicity</b>	No information available
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### | Chronic aquatic toxicity

<b>Chronic aquatic toxicity</b>	No information available
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### | Persistence and degradability

<b>Persistence and degradability</b>	No information available
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### | Bioaccumulative potential

<b>Bioaccumulative potential</b>	No information available
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### | Mobility in soil

Component	log K <sub>oc</sub>	Remark
Tetramethylammonium hydroxide	2.75	20 °C

## 13 Disposal considerations

### | Disposal considerations

<b>Waste chemicals</b>	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
<b>Contaminated packaging</b>	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
<b>Disposal recommendations</b>	Refer to section waste chemicals and contaminated packaging.

## 14 Transport information

### | Label and Mark

<b>Transporting Label</b>	 
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### | IMDG-CODE

UN number	3289
UN proper shipping name	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
Transport hazard class	6.1
Transport subsidiary hazard class	8
Packing group	II
Marine pollutant ( Yes or no )	No

#### IATA-DGR

UN number	3289
UN proper shipping name	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
Transport hazard class	6.1
Transport subsidiary hazard class	8
Packing group	II

#### UN-ADR

UN number	3289
UN proper shipping name	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
Transport hazard class	6.1
Transport subsidiary hazard class	8
Packing group	II

#### Transport in bulk according to IMO instruments

- ◆ Transport in bulk according to Annex II of MARPOL and the IBC code

	Not Available
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- ◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available
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- ◆ Transport in bulk in accordance with the IGC Code

	Not Available
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#### Others

Precautions for transport	Transit should be anti-exposure, rain, high temperature. Strictly prohibited shipping or transportation with acids, alkalis, oxidants, food and food additives etc. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.
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## 15 Regulatory information

#### International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Water	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

<b>Tetramethylammonium hydroxide</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>[A]</b> China Inventory of Existing Chemical Substances(IECSC) <b>[B]</b> European Inventory of Existing Commercial Chemical Substances(EC inventory) <b>[C]</b> United States Toxic Substances Control Act Inventory(TSCA) <b>[D]</b> Canadian Domestic Substances List(DSL) <b>[E]</b> New Zealand Inventory of Chemicals(NZIoC) <b>[F]</b> Philippines Inventory of Chemicals and Chemical Substances(PICCS) <b>[G]</b> Korea Existing Chemicals Inventory(KECL) <b>[H]</b> Australian. Inventory of Industrial Chemical (AIICS) <b>[I]</b> Japan Inventory of Existing & New Chemical Substances(ENCS) <b>[J]</b> Thailand Existing Chemicals Inventory(TECI) <b>[K]</b> Mexico National Inventory of Chemical Substances (INSQ) <b>[L]</b> Russia Inventory of Existing Substances(DRAFT) <b>[M]</b> Inventory of Existing Chemical Substances in Taiwan, China (TCSI)													

### List of Chemical Substances under International Conventions

Component	A	B	C
<b>Water</b>	×	×	×
<b>Tetramethylammonium hydroxide</b>	×	×	×

- [A]** The Montreal Protocol on Substances that Deplete the Ozone Layer  
**[B]** Stockholm Convention on Persistent Organic Pollutants (POPs)  
**[C]** Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

### US chemical inventory

Component	A	B	C	D	E	F	G	H
<b>Water</b>	×	×	×	×	×	×	×	×
<b>Tetramethylammonium hydroxide</b>	×	×	×	×	✓	×	✓	×

- [A]** US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants  
**[B]** US SARA 302- Extremely Hazardous Substance List  
**[C]** US CERCLA- Hazardous Substances List  
**[D]** US Massachusetts Right-to-Know Substance List  
**[E]** US New Jersey Right to Know Hazardous Substance List  
**[F]** US Pennsylvania Right to Know Hazardous Substance List  
**[G]** US New York City Right-to-Know Hazardous Substance List  
**[H]** US California Proposition 65 List

Note:

- “✓” Indicates that the substance included in the regulations.  
 “x” No data or not included in the regulations.

## 16 Other information

### Information on revision

<b>Creation Date</b>	2025/11/04
<b>Revision Date</b>	-
<b>Reason for revision</b>	-

### Reference

- [1] IPCS: The International Chemical SafetyCards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>.  
 [2] IARC, website: <http://www.iarc.fr/>.

- [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.echemportal.org/echemportal/>.  
[4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.  
[5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.  
[6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.  
[7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.  
[8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

## Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC <sub>50</sub>	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD <sub>50</sub>	Lethal Dose 50%	NTP	National Toxicology Program
EC <sub>50</sub>	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC <sub>x</sub>	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P <sub>OW</sub>	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

## Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2024. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.